

ID 1524 | WHAT IF LARGE INFRASTRUCTURE PROJECT PROCESSES ADOPTED A COEVOLUTIONARY CHARACTER? DISCUSSING THE MERITS AND CONSEQUENCES FOR THE OOSTERWHEEL LINK PROJECT, ANTWERP

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1 INTRODUCTION

In the quest for a more sustainable mobility, present mobility planning approaches do not prove effective. In particular in the case of large infrastructure projects (LIPs) this becomes manifest; realising LIPs has become tremendously difficult these days, resulting in many stranded projects. Previous LIP-research has shown that complexity is behind these struggles, in all its facets. Although decision makers often still focus merely on financial, technical and legal issues of complexity (Flyvbjerg, 2007; Priemus, 2007), it becomes increasingly clear that the influence of social and organizational complexity is heavily underestimated with respect to planning processes and procedures, see Figure 1 (Hertogh & Westerveld, 2010).

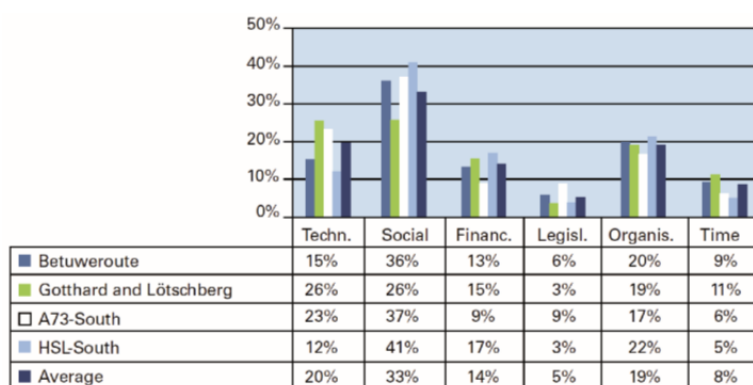


Figure 1. Views of complexity from multiple LIPs: Betuweroute, Gotthard, Lötschberg, A73-South and HSL-South.
Source: Hertogh and Westerveld (2010, p. 175, figure 4.8)

The social component of complexity relates to the number and representation of the actors and the alignment of their (conflicting) demands. Often, the decision making process is still in the hands of vested planning actors favouring backroom politics. The organisational aspect of complexity, that is closely connected to the social component, focuses on the (power) relation between the stakeholders, the responsibilities, the appropriate scale levels, etc. The fact that up till now – with respect to LIPs – the focus stays on the financial costs, the risks and opportunities relating to the progress in time, and the technical aspects (Flyvbjerg, 2007; Priemus, 2007) points towards the prevailing technocratic planning approach, towards the notion of the (mobility) planner as engineer. While this planning perspective used to pay off, more recently however, other mobility planning approaches have been sought for, since “complexity strikes back if it is neglected” (Salet, Bertolini, & Giezen, 2013, p. 1989). Hence, the central question here is: (1) What can such new complexity embracing mobility planning approach add to LIP planning processes? , and (2) What does this mean for the actors and their roles? We hereby also consider recent attempts to work with complexity in the policy fields of mobility and spatial planning, and what they have obtained so far.

The paper is structured as follows. Chapter 2 gives a brief overview of why we need to grasp complexity in the planning process and to which extent these ideas are already implemented. In chapter 3 we test these ideas and planning approach with vested planning actors in the case study of the Oosterweel Link. But first we have to take you through the project history of this case. Chapter 4 presents the discussion and final conclusions on what coevolution can add to LIP-planning processes.

2 EMBRACING COMPLEXITY IN MOBILITY PLANNING

Many mobility planning strategies, and LIP strategies in particular, still focus too much on the implementation or the input-output story. Furthermore, too often LIPs are handled within the sole field of infrastructure and public works, while the interests and implications reach most other policy fields and even plans as well (finance, economy, environment, spatial planning, labour, etc.). Hence, a lot more stakeholders (government bodies, civil movements and other societal stakeholders) enter the planning scene, making alignment more difficult in the planning process.

Apart from the various interests and claims during the project, also knowledge is quickly accumulating through the years, so the processes (or throughput) themselves should have more autonomy in such LIPs. (G. R. Teisman, 2008). Nowadays, planning strategies often still remind us too much of an stepwise action plan. Based on linear think patterns a somewhat naive and reductionist trajectory is defined towards a clearly and a-priori defined goal: the implementation (Paredis & Block, 2015; Priemus, 2007; Salet et al., 2013; Swyngedouw, Moulaert, & Rodriguez, 2002). In many cases, however, planning strategies are not just standard formulas, they have to fit the specificity of the situation (time, place, actor constellations, environment, etc.).

In dealing with this complex reality the concept of complex adaptive system (CASs) increasingly gains attention in several fields: public administration (Hertogh & Westerveld, 2010; Pel & Teisman, 2009; G. Teisman, van Buuren, & Gerrits, 2009; G. R. Teisman, 2008), spatial planning (Boonstra & Boelens, 2011; Van Assche, Beunen, & Duineveld, 2013; Van Assche, Beunen, Jacobs, & Teampau, 2011), and on the interplay between spatial planning and mobility in LIPs (Hertogh & Westerveld, 2010; Salet et al., 2013). Processes of self-organisation and coevolution are at the heart of CASs (Boelens & De Roo, 2014; G. R. Teisman, 2008; Van Brussel, Boelens, & Lauwers, 2016), pointing out the delusion of a complete steering. We particularly built on the work on LIPs of Hertogh and Westerveld (2010) and their 'dynamic management'¹ approach to deal with the encountered complexity. But what can such a coevolution framework add to the LIP planning processes? Therefore we turned towards one of the largest and most complex LIP cases in Belgium and confronted some of the key stakeholders with these concepts and approaches in a round table discussion.

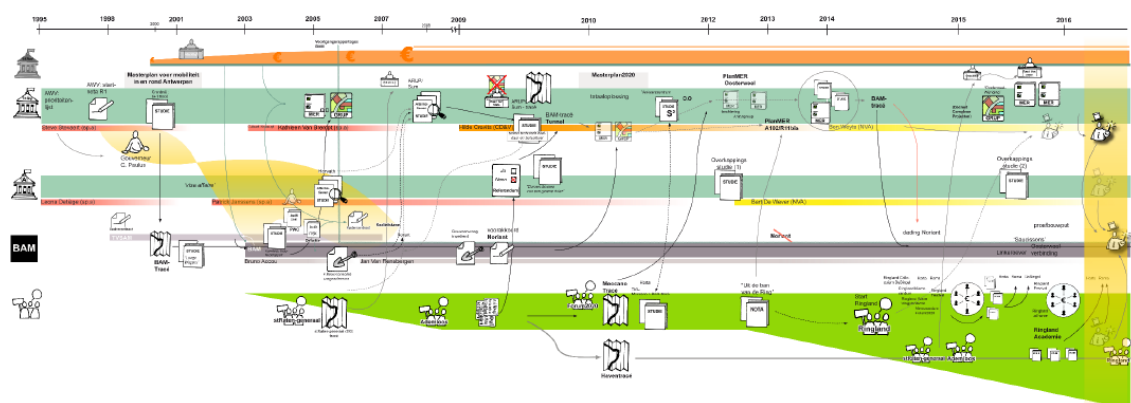


Figure 2. The Oosterweel LIP process distinguishing the different actor groups and their interconnections (own elaboration)

3 CASE LIP OOSTERWEEL LINK

The Oosterweel Link LIP (Antwerp, Belgium) is the research object of this case study for several reasons. The project process is already long lasting, the project is controversial and the process can be characterised by various rounds of opposition resulting in change. Furthermore, there is a sense of urgency as the congested mobility situation necessitates action. Describing the project process we focus on the different actor groups and there interactions, see Figure 2. The big project tracks or actor groups

¹ We do not like the 'management' word in 'dynamic management', as in our opinion a complete steering can never be reached. But we see in the approach however the elements of or parallels with a certain manoeuvring for coevolution: the search for alignment, the changing actor field, changing conditions, etc. (Hertogh & Westerveld, 2010)

involved are the Flemish government, the Flemish parliament, the City of Antwerp, the project management team appointed by the Flemish Government (i.e. BAM), and the activist groups or citizen movements. We also shed light on other protagonists in the story that took the role of game changers: the governor of the Antwerp province and the intendant (respectively in beginning of the project and in most recent project years).

3.1 THE OOSTERWEEL LINK STORY

3.1.1 ONCE UPON A TIME AN OPTIMISTIC AND FUTURISTIC INFRASTRUCTURE STORY STARTS... (1995-2005)

In 1995 the Flemish Agency for Roads and Traffic launched the start of a new masterplan to counter the structural congestion in and around Antwerp. The completion of the Antwerp ring road with the Oosterweel Link (Figure 3) was perceived the crown jewel of the masterplan that would solve all problems. The Oosterweel Link was conceived as a combination of a tunnel with a double deck viaduct called 'Lange Wapper'. The governor of the Antwerp province, Camille Paulus, was in favour of these infrastructure designs. To define the precise route of the LIP a study was carried out by ABM (Atenco, Belgroma –



Grontmij, and Maunsell). This study came up with 6 plausible routes, but in the end a 7th possibility was added, a combination of parts of the previous options. The City of Antwerp, the Port of Antwerp, the province of Antwerp, the Flemish administration and some other institutions approved this 'optimised medium route', which later became notorious as the 'BAM-route'. Only this route would be further studied and elaborated (Verhoeven & Ysebaert, 2008).

Figure 3. The Oosterweel Link section (red).
Source: Het Nieuwsblad, March 4, 2009,
http://www.nieuwsblad.be/cnt/dmf04032009_049

In 2001 a consultancy consortium (TV SAM) was commissioned by the Flemish Government to elaborate that route. To promote the masterplan and to acquire the necessary support base a States-General was organised by the governor, bringing most vested institutions and agencies together, but only little publicity was given to it. By 2003, a management company was established (BAM, Beheermaatschappij Antwerpen Mobiel) to take over the project management and to replace the role of the Flemish administration in fulfilling the framework agreement with TV SAM, as a private company that functions independent of political interference. A close collaboration between the consultants of TVSAM and BAM started. When determining and securing the route of the LIP in a regional implementation plan (GRUP), they preferred to follow the (at that moment still optional) environmental impact assessment procedures.

3.1.2 THE AWAKENING – AFTER HAVING SEEN THE MODEL AND THE COST INCREASE... (2005-2009)



Figure 4. Model of the Lange Wapper double deck viaduct skimming over the City of Antwerp without and with underlying urban fabric. Source: (right) <http://4.bp.blogspot.com>; and (left) <http://www.bavo.biz/img/images/langewapper%2012.jpg>.

When the BAM, in 2005, eventually showed the model of the Oosterweel Link to the press and the Flemish parliament, it caused a lot of commotion and reactions were almost unanimous enthusiastic. But it was met with great resistance afterwards, during the public inquiry of that procedure where the model was shown for the general public for the first time. stRaten-generaal, an activist group, came with its own alternative route suggesting to alleviate the city from transit traffic and complete the ring road much further away. The City of Antwerp was alarmed and wanted to buy time before making a decision. An extra study of the alternatives was launched: the Horvat study (carried out by Horvat). In addition to the BAM-route with the



Lange Wapper viaduct, this study also took into account the tunnel variant of the BAM-route (called Horvat-route) and the alternative of stRaten-generaal. The research took only two months after which one concluded that a tunnel option was more expensive than a viaduct. Hence the approval was given for the viaduct landmark and the tunnel option was abandoned. Building consortia were notified for designing, elaborating and implementing the BAM-route.

Figure 5. Tunnel variant of the Oosterweel Link on the BAM-route (Horvat). Source: http://www.nieuwsblad.be/cnt/dmf04032009_049

Finally four consortia were retained for submitting their 'best and final offer'. An independent quality division ('kwaliteitskamer'), existing of national and international experts in the field and chaired by the governor, was established to examine and criticize these BAFO's and advise the management company BAM on their final decision. Soon preference was given to the offer of the Noriant consortium and the other consortia were excluded, though their final offer was criticized by the quality division for not being the most economical, nor most qualitative one. It appeared that the governor had an eye to the architectural beauty of the Lange Wapper viaduct for his province (Penris & Peumans, 2007).

In parliament they had difficulty to accept that alternative routes were still taken into account during the environmental impact assessment (EIA, MER), while the building consortia had to finalise their BAFO's according to the BAM-route. In addition, by absence of valid competitors, the total cost of the Oosterweel Link proposal could increase from 0.6 to 1.3 billion euros. This raised many questions about the communication and the transparency of the BAM and the opposition towards the deal with Noriant grew from then on. The precise roles and relations between TV SAM and BAM remained vague and the budgetary resources for the conducted research were repeatedly questioned. In response, BAM commissioned PWC and Deloitte for an external audit of TV SAM. The commission decided to follow the dossier more closely from then on. From 2005, regular progress reports were to be presented by BAM in

the parliamentary commission and also the Court of Audit of Belgium monitored the made progress (Peumans & Penris, 2005). Nonetheless, due to the accumulated delays and compensation measures, the total cost estimates continued rising. Therefore, at the end of 2007 the Flemish Government established a price cap for the project of 1.8 billion euros (Penris & Peumans, 2007, p. 7).

3.1.3 FROM LANDMARK TO ... SCRATCH? (2008-2012)

In 2008, Ademloos ('Breathless') a new civil movement stood up to put the harmful environmental health impact of such an infrastructure project on the Antwerp citizen on the agenda. Ademloos came up with the aspect of health and air quality and was experienced with communication strategies, whereas stRaten-generaal mainly focused on the technical aspects (e.g. alternative route), and quality of life issues in general. A fruitful collaboration between the two civil movements had started, whereby each organisation remained faithful to its own specialty.

Under the pressure of an increasing opposition against the Oosterweel Link project, the Flemish government decides to have all alternative routes for the project studied once more (L.B., 2010). In July 2008, when Arup/Sum starts the investigation of which the stakes are high. However, when in March 2008 the results of this study are presented, none of the proposed routes excels the others regarding all measured aspects. Consequently Arup/Sum proposes to elaborate an alternative route itself, whereby the third crossing of the river Scheldt is located more northerly, similar to the proposal of stRaten-generaal. The Flemish government approves this additional work, but does not want to wait for the conclusions and has instructed BAM to continue on the chosen path. While Arup/Sum is elaborating its alternative route (Arup/Sum-route), according to their decision of March 28, 2009, the Flemish government instructs the BAM to file the building permission for the implementation of the Lange Wapper. But due to the Arup/Sum study the final agreement on the routing of the project was postponed for the next legislature.

Soon after the decision, the civil movements launched a petition against the BAM-route of the Oosterweel Link project and together they managed to enforce a referendum. Their support base grew steadily (Moolenaar, 2008; Verelst, 2011, pp. 163-165,185). On October 18 (2009) on their first public event they victoriously terminated the Lange Wapper chapter in the Oosterweel Link story as the majority of the citizens voted against the viaduct in the referendum (Vandenbergh, 2009). The civil movements criticized that their proposed route was not taken into account properly in the EIA (projectMER), which they could only consult much later when the damage was done. Besides, the building consortia were already notified to elaborate an infrastructure design for the Lange Wapper viaduct on the BAM-route while the environmental impact assessment, comparing the different alternatives, was not yet concluded.

In July 2009, completely unexpectedly, the further research of Arup/Sum concludes that the studied Arup/Sum-route tunnel alternative is technically feasible and economically viable. But more important, that at all levels their alternative performs better than the Lange Wapper viaduct on the BAM-route. Swayed by the growing civil opposition the City of Antwerp organises a referendum at October 18 (2009) that results in the rejection of the Lange Wapper viaduct (Brinckman, 2010). Consequently as the permits and plans were delivered precisely for the viaduct structure, the procedures of the regional spatial implementation plan and the associated EIAs (and their public inquiries) had to be redone for the tunnel-variant on the same route. Because of the referendum the project had changed substantially and a new full-rebidding was unavoidable. This compromised the financial agreement that was already made with the building consortium Noriant for the Lange Wapper (Dendooven, 2010; Verstraete, 2010).

In 2010 the Flemish government promised to take a final decision in the Oosterweel case running through the alternatives once more and include them in the environmental impact assessments. This fits within the launch of a new Masterplan 2020, that has a broadened scope and looks for a total and multimodal solution for mobility and includes mitigating measures compensating for quality of life aspects.

In the meantime, the civil movements elaborate their alternative the 'Meccano-route', an optimization of the Arup/Sum-route (that in turn was based on the previous stRaten-generaal-route). Together with Forum

2020, a group of influential experts and managers in Antwerp, they have their Meccano-route studied by an independent research institute (TML). The results of the TML study comparing Meccano-route with the BAM-route are favourable to the Meccano-route (Yperman & De Ceuster, 2010). In response, the Flemish

administration instructed the Flemish Traffic Agency to investigate the TML-study (Grispen, 2011). It seemed like a cat-and mouse game with high stakes.



In 2012 a new research institute (Anteagroup) is entrusted to carry out the environmental impact assessment, in which in addition to the BAM-route (tunnel variant) and the Meccano-route, five other alternatives are included (one of which is the Oosterweel North-route), see Figure 6. The implementation of the tangents A102 and R11bis is already incorporated in the Masterplan 2020 at that moment.

Figure 6. The alternatives investigated in the environmental impact assessment. Source: De

Standaard

3.1.4 A NEW BREATH FOR THE ANTWERP CITIZEN (2012-2015)

Since air quality and environmental health has entered the debate in 2008, the theme of (partially) capping or tunnelling some major roads would never disappear. Through research by design, the City of Antwerp looks into the feasibility and impact of capping (parts) of the city road network. In November 2012, Ringland, a new civil movement in Antwerp stands up and launches the idea of capping the southern ring road. It is the dawn of a new era of civil opposition.

In 2014 Anteagroup finalises the EIA (planMER Oosterweel) on the basis of which the Flemish government decides on February 14 to follow the chosen path of the BAM-route (stated policy, 'beslist beleid'). To refrain from further legal actions Noriant received a settlement of 37.19 million euros (Moen, 2014), a measure that was met with dismay in parliament.

On the same day of the Valentine's decision of the government, the Ringland initiative officially arose, proclaiming the capping of the ring to ameliorate the liveability and health of the citizens, in combination with a new concept for the ring road structure. This implementation alternative to the southern part of the ring road was partly inspired by the capped M30 in Madrid and suggested earlier by stRaten-generaal. Beyond problem solving, Ringland (the land on the ring road) was especially well-developed and presented as an opportunity for enhancing and managing a qualitative and liveable urban growth. First the concept was elaborated within the urban planning and architecture office Stramien. Using appealing



representations of this concept (Figure 7), Peter Vermeulen, the leading urbanist of this office, and his Ringland entourage steadily gained ground. The civil support base reached even further than the Antwerp city. The other activist groups joined the new spirit and collaborated with Ringland. The opposition to the BAM project gained a more positive public image.

Figure 7. Ringland, the concept. Source: Ringland

In three months' time, by the end of 2014, Ringland had collected more than 100 000 euro, by symbolically selling the land on the surface of the ring (4m² for €20). Ringland spent this crowd funding money on extra

research: a mobility study, a cost benefit study and a liveability study (E.D.M., 2015). StRaten-generaal and Ademloos launched an online call to publicly vote for Ringland and, thus, against the spatial implementation plan of Oosterweel (GRUP Oosterweel) (Ademloos, 2015). Embracing social media, finally over 15.000 statements of objections were obtained. This gave the opposition groups the right to speak in the Flemish Parliament on July 2 (De Standaard, 2015).

In the field however, the preparatory works already started in the end of 2015 (B.B.R., 2015). As the opposition parties and many citizens support Ringland, the government decided to establish an 'intendant' (an idea prompted by Ringland itself); this external person should harmonise the Ringland and the BAM project, bring all actors together and look for opportunities to pursue a maximal capping of the ring road within the project margins as negotiated with the BAM. For the latter reason opposition groups were sceptical and expected little room for manoeuvre for the intendant, thus little outcome.

In the end of 2015 and the beginning of 2016, Ringland starts a new campaign and launches the Ringland Academy, bringing together a wider group of experts and professionals beyond the core Ringland team. They offer ad-hoc inputs into Ringland's activities, contribute to ongoing study work, and develop projects related to one of the core-themes of Ringland. The CurieuzeNeuzen air quality citizen science project has been one of the main outputs of the Ringland Academy up to now. Aside from its objective to better understand air quality problems in Antwerp, CurieuzeNeuzen was created to sensitize and trigger Antwerp citizens (and politicians) about their living environment and the urgency for action with respect to traffic-related air pollution. As such, Ringland manages to increase its support base by inventing themselves over and over again.

3.1.5 WORKING WITH THE INTENDANT – LANDING OR STRANDING? (2016-...)

In the end of 2015 after public tendering, Alexander D'Hooghe is selected as 'intendant' or mediator; he is a professor at the MIT and experienced with participatory processes, e.g. in the 'Rebuild by design' initiative in the aftermath of the passage of hurricane Sandy in New York. In January 2016, he starts inviting all stakeholders to hear and discuss their ambitions and values in the story. Within six months he should deliver an ambition paper, in which the outlines for a maximal capping of the ring road are formulated and supported by all stakeholders. Some find his mandate too limited, as the BAM and the Flemish Government only commissioned the investigation of the capping options, leaving an inquiry of the mobility system underneath out of discussion. During his mandate he gained the trust of all stakeholders and the privately and confined or 'safe' atmosphere in which the 'super workshops' took place to elaborate opportunities, collaborate and discuss a possible compromise payed off quite well already. For the southern part a political compromise was reached and supported by all stakeholders (City of Antwerp, the civil movements, the Flemish administration and the Minister) (Huyse, 2016; Van Ginneken, 2016). For the northern part the debates and private meetings are still ongoing at the time of writing. Stakes are high, as the three civil movements already collected enough signatures to enforce a second referendum in



Antwerp, in case the government would not postpone the submission of the building permit for the Oosterweel Link till after the intendant finishes his work within the different workshops (Huyse, 2016; Vermeulen & BELGA, 2016). It seems that a compromise is in the making, the intendant and the major stakeholders still elaborate a new option – a combination of the BAM-proposal (Oosterweel Link but 'light' version) and that of the citizen movements (a capping of the whole ring road and the completion of the ring further north of the city)(see Figure 8), but it is not sure if the project will land or strand in the coming weeks (Brinckman, 2017).

Figure 8. Compromise proposed by intendant. Source: Brinckman (2017)

3.2 ROUNDTABLE OUTCOMES – THE OOSTERWEEL LINK PROCESS FROM THE STAKEHOLDERS’ PERSPECTIVE



Figure 9. Participants roundtable Complex Infrastructure projects – Universiteitsclub UA, Thursday May, 26 2016

3.2.1 COEVOLUTION? IDENTIFYING CLICK-MOMENTS

In the roundtable we confronted the participants with the whole project history again, just like we took you through the project in the previous section. The challenge was to bring the key-stakeholders¹ in the process together (Figure 9), to hear about how they perceived the encountered complexities, and to see if they could sympathize with each other’s perspectives and decisions at several crucial moments in the project process. To cope with the encountered complexity, we focused on a coevolutionary approach, incorporating elements of the ‘dynamic management’ as proposed by Hertogh and Westerveld (2010), in which sufficient flexibility is guaranteed, but in which the omnipresent urgency to act can also be responded to (focus on control on several moments). The various stakeholders could see the merits of such approach and were asked about how they perceived the coevolution in the process. They ended up with identifying key-moments or ‘click’-moments (as some proposed) that were decisive for the rest of the (coevolutionary) process. However according to the civil movements some of these click-moments were ambiguous as they seemed to leave some possibilities open for alternative options.

As a first click-moment all participants identified the moment in the 2nd round, in 2008, in which the results of the Arup/Sum alternatives assessment were presented and the moment had potential. The alternatives were assessed and compared based on various criteria. When the bureau proposed to conduct a follow-up study because it was concluded that none of the proposed routes excelled all the others, the Flemish government made the ‘fatal mistake’ to make of this moment an ambiguous click-moment according to the roundtable participants: the government commissioned Arup/Sum to carry out this further research (i.e. non-click but open), while at the same time the BAM was commissioned to prepare the building permission (i.e. click). The roundtable argued that the government should have taken a break and set the Oosterweel Link procedures ‘on hold’. By the made decision trust was compromised and polarisation increased. Everyone agreed that a pause was not sufficient, one should have switched to a co-creative approach already back then.

A second click-moment, in particular concerning the civil movements was the decision of the Flemish government in 2011 to assess all alternatives once and for all in a final environmental impact assessment. At that moment, the civil movements cherished hopes that all their suggestions and supplied ideas would be taken into account seriously. However, after a while this feeling of trust disappeared by lack of sustained communication, which is – according to the administration – inherent to the formal procedures. Also the transparency with which the alternative options were adopted and modelled in the assessment was criticized. Not all alternatives were taken into account on the same grounds. This prompted the civil movements to file a legal complaint as their last hope.

¹ Also the Alderman for Mobility of the city of Antwerp (K. Kennis), the governor of the Antwerp province (C. Berx), and a representative from VOKA (the Chamber of Commerce, representing the Flemish entrepreneurial sector) were invited and willing to join, but were eliminated after a doodle round of checking agendas.

For some roundtable participants the exact click might have happened a bit earlier: on the moment that the Flemish government decides on the 'optimised medium-route' (the later BAM-route) already in round 1. Some argue that once the political choice is made, one should respect that decision and one cannot call that into question over and over again. Otherwise the project stagnates and opposition increases. But not all participants agree with that, as they argue that the process was not transparent enough, not well-communicated, there was no participation at all and thus no broad support base as the project was steered completely internally. Besides, on various moments unfair treatment of alternatives or decision made with conflicts of interest, made these decisions unstable. Furthermore, the enduring protest against the project has broadened the project scope: quality of life aspects, a redesign of the mobility system, the aspect of air quality and the concept of capping, etc. were initially not on the agenda.

The civil movements argue that it is only logical that the process has to be redone, since the project scope has more than doubled. But the participants representing the administrations replied that the question is rather 'how long can the government as client last without a solution?' They point out the risks of taking more than you can actually handle, of overcharging the project. Because that would make the project fail. As such they are in favour of not questioning previous decisions. But there is no lacking sense of urgency, but according to some, although the problem is clear, the problem solution(s) and precise objectives are not (!) and are still frequently questioned. Is a third crossing of the river Scheldt actually necessary and solve the problem? Even that is questioned, so, how can we decide already?

A final indicated click-moment is the decision of the Flemish government to definitively choose for the BAM-route (see round 4). However this felt for all roundtable participants also as a quite ambiguous click as the government had just appointed an intendant (this idea was prompted by Ringland) to align all actors and build a broad support base for the capping (cf. idea of civil movements) of the Oosterweel Link project (on the BAM-route). Most participants had at the moment of the round table just started an intensive and private cooperation process guided by this intendant, the mandate of which was according to the civil movements and most experts in the debate too limited. Wasn't this also a moment for a pause to alleviate the ongoing processes of this intendant?

4 DISCUSSION AND CONCLUSIONS

Realising large infrastructure projects (LIPs) has become tremendously difficult nowadays and many projects strand. Although decision makers often still focus merely on financial, technical and legal issues of complexity it becomes increasingly clear that the influence of social and organizational complexity is heavily underestimated with respect to planning processes and procedures, also in the case of the LIP Oosterweel Link. Since complexity in its many aspects seems behind all those LIP-struggles, we need to switch from the prevailing and often linear technocratic planning approach to an approach that holds in the encounter with complexity. That is why we wanted to explore the coevolutionary character of the whole process. We hosted both vested and civic actors of the Oosterweel Link case in a round table discussion and confronted them with the project history again. The discussion proved successful with respect to (1) acknowledging the encountered complexity and the utility of a coevolutionary perspective in this respect and (2) understanding the made choices and identifying the crucial moments that made or broke this coevolutionary process. What did coevolution add to the LIP Oosterweel Link? What did it imply for the actors' roles?

The participants argued that the key for working with complexity is to release the process and to shift focus from project output or implementation towards the process of co-creation. They identified click-moments where coevolution flourished or got stuck in the case. Furthermore, they agreed on the necessity of a more integrated way of working, implying a less fragmented government. There should be a balance of interaction from the beginning on and control (decisions or 'clicks' should also be made in case of a broad support base). The importance of a mediator or intendant was acknowledged in this case to balance between interaction and control. It seemed more difficult for the participants to decide on the best moments and powers for control: what the click-moment includes and who finally decides.

From a coevolutionary perspective, observing all (inter)actors and agendas at stake (Figure 2), we could oversee the merits of the various rounds of opposition and delay. Thanks to the first citizen movements and their opposition, the project's scope incorporated the liveability aspects, environmental (and) health aspects. Though there were some moments of convergence, the conflict model prevailed in those rounds.

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ID 1585 | DECODING AND MANAGING CITIES: TOWARD A COMPLEX AND DYNAMIC SYSTEM APPROACH

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1 INTRODUCTION

Due to the rapid growth of cities and their social, cultural, economic and technological evolution, the policies and legislative instruments need to adapt to this change. By 2050, United-Nations estimate 6.4 billion people¹ are expected to be living in cities (Riffat et al., 2016), with relevant consequences on resources, emissions and services². In spite of this, the development of Europe's cities and the relations among them constitute one of the most important driving force for the future of Europe (Rotmans and Van Asselt, 2000).

The complexity of the urban phenomena needs to be investigated in an integrated manner, through the management of the systems and processes making up the city. Indeed, the city is recognised in literature as a complex, open and adaptive system, that evolves in time and space (Portugali et al., 2012), (Healy,

¹ The recent report by the United-Nations (2014) estimate 3.9 billion urban population in 2014 itself.

² http://ec.europa.eu/eurostat/statistics-explained/index.php/Urban_Europe_%E2%80%94_statistics_on_cities,_towns_and_suburbs